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ABSTRACT

Little information has been generated regarding the convergent and discriminant validity of measures used to investigate children's ethnic attitudes. The present study explores these aspects of validity by examining the relationships among three measures of ethnic attitude and between these measures and two measures of egocentrism. Attitude measures investigated were the Doll Choice, the Preschool Racial Attitude Measure II, and the Katz-Zalk Projective Prejudice Test; measures of egocentricism used were the Role-Taking Task and the Perspective-Taking Task. Participating in the study were 105 white second, third, and fourth graders, whose ages ranged from approximately 7 to 11 years. Results indicated that, of the three ethnic attitude measures, only the Preschool Racial Attitude Measure II revealed a pattern of correlations suggestive of both convergent and discriminant validity. The findings are interpreted as indicating the possibility that various ethnic attitude measures may be tapping different aspects of the same construct. In addition, the possibility is raised that the Doll Choice, and perhaps other ethnic attitude measures, may reflect aspects of ethnic attitude that are related to a child's more general cognitive role-taking skills. (RH)

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# Exploring the Convergent and Discriminant Validity of Children's Ethnic Attitude Measures: the Relationships Between Ethnic Attitude and Egocentrism Measures

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## Abstract

Important methodological problems exist in the measurement of children's ethnic attitudes. Specifically, little information has been generated regarding both the convergent and discriminant validity of the ethnic attitude measures used in this area of research. The present study explores these aspects of validity by examining: a) the relationships among three measures of ethnic attitude (the Doll Choice, the Preschool Racial Attitude Measure II, and the Katz-Zalk Projective Prejudice Test), and b) the relationships between these measures and two measures of a second construct, egocentrism (the Role-Taking Task and the Perspective-Taking Task). Results indicated that only one of the three ethnic attitude measures revealed a pattern of correlations suggestive of both convergent and discriminant validity. The findings are interpreted as indicating the possibility that various ethnic attitude measures may be tapping different aspects of the same construct. In addition, the possibility is raised that the Doll Choice, and perhaps other ethnic attitude measures , may reflect aspects of ethnic attitude which are related to a child's more general cognitive role-taking skills.

# Exploring the Convergent and Discriminant Validity of Children's Ethnic Attitude Measures: the Relationships Between Ethnic Attitude and Egocentrism Measures

Research on the assessment of children's ethnic attitudes has been a topic of interest, particularly within the past fifteen years. The majority of studies have relied upon measures which require the child to choose between a dark or light skinned picture figure, facial photo, or doll in response to a series of evaluative questions. Unfortunately, reviews of findings in this area reveal important methodological problems (Brand, Ruiz, & Padilla, 1974; Carter, DeTine-Carter, & Dembo, 1980; Katz, 1976). Especially lacking are investigations which evaluate both the convergent and discriminant validity of particular measures used in this research.

Several studies (Ballard & Keller, 1976; Katz, Sohn, & Zalk, 1975; Katz & Zalk, 1978; Lerner & Knapp, 1976; Teplin, 1977a, 1977b) have found evidence suggesting a lack of convergent validity among various ethnic attitude measures, even when measures were specifically selected for task

response consistency. Despite purporting to measure the same entity, ethnic attitude, the measures had low and nonsignificant correlations with each other. Additionally, while both discriminant as well as convergent validity are critical in establishing the usefulness of such measures (Campbell & Fiske, 1959), only one study by Teplin (1977b) could be located which addressed both forms of validity. Findings from this multimethod study indicated there was significant discriminant validity between fantasy-based ethnic attitude methods (e.g. methods using photos or questions about people unknown to the participant), and reality-based measures (e.g. actual sociometric choices in a classroom activity). Teplin (1977b) suggests that, based upon such results, caution should be exercised in generalizing from projectively-based techniques to actual social situations. However, the findings also showed that while reality-based methods demonstrated high convergent validity, the fantasy-based method using faces unknown to the children revealed low correlations with the other ethnic attitude measures. This latter result is particularly significant given that the majority of studies in this area use picture and photo stimuli unknown to the participant.

While Teplin's (1977b) study reveals important information on the

discriminant validity between various methods of measuring ethnic attitudes, it does not address an additional test of discriminant validity: i.e. the discriminant validity between ethnic attitude measures and measures of a theoretically separate construct. In addition, the research did not include currently used ethnic attitude measures. Therefore, while the results have general implications for methods used in assessing children's ethnic attitudes, they do not provide direct information to researchers as to the validity of specific measures now found in the literature.

The present investigation further explores the issues of convergent and discriminant validity using a simplified version of a multitrait–multimethod matrix (Campbell & Fiske, 1959). The study uses a simplified version in that it does not systematically include multiple methods of measuring the constructs to be examined. (The systematic inclusion of multiple methods in addition to multiple constructs would have extended the amount of test time beyond that possible with the young children used in the present study). Convergent validity was assessed through an examination of the relationships among three currently employed measures of children's ethnic attitudes: a) the Doll Choice (Clark & Clark, 1939; Friedman, 1980), b) the Preschool Racial Attitude Measure–PRAM II (Williams,

Best, & Boswell, 1975; Williams, Best, Boswell, Mattson, & Graves, 1975), and c) the Katz-Zalk Projective Prejudice Test- KZ (Katz & Zalk, 1978; Zalk & Katz, 1976). Each of these measures requires the participant to choose between Black and Anglo stimulus figures following questions in which attributions of positive and negative qualities must be made. In each case, the stimulus figures are unknown to the participant.

The issue of discriminant validity was also explored in this study by examining the relationship between participants' scores on the three ethnic attitude measures to their scores on two measures of a second construct, egocentrism: a) a Role-Taking Task (Flavell, Botkin, Fry, Wright, & Jarvis, 1968), and b) a perceptual Perspective-Taking Task (Fishbein, Lewis, & Keiffer, 1972). Egocentrism, defined as the inability to take another's perspective or the embeddedness in one's own view (Elkind, 1967), has traditionally been represented as a developmental construct separate from a child's ethnic attitude. However, research conducted independently in each of these areas indicates that they also demonstrate similarities. Evidence suggests that children become less egocentric (Kurdeck, 1978; Looft, 1972), form more consistent ethnic attitudes, and become less ethnocentric (Goodman, 1952; Katz, Sohn, & Zalk, 1975; Williams, Best, & Boswell, 1975) at

approximately the same ages. Ethnocentrism, a specific type of ethnic attitude in which individuals assume the superiority of their own ethnic group over others, can be seen as a form of egocentrism with regard to ethnicity. Additionally, recent studies directly examining the relationship between ethnic attitudes and egocentrism suggest that a child's level of cognitive development may be related to ethnic preference (Clark, Hocevar, & Dembo 1980; Hohn, 1973).

The similarities between egocentrism and ethnic attitude make a comparison of their measures a particularly interesting one since, despite these similarities, studies in the two areas have been treated quite separately and their respective measures are assumed to tap different constructs. In establishing the discriminant validity of ethnic attitude measures, it is important to assess the degree to which these measures are uncorrelated with measures of egocentrism. Given their similarities, an analysis of the relationship between measures of the two constructs presents a strong and meaningful test of discriminant validity. Relatively low correlations between ethnic attitude and egocentrism measures would suggest evidence in favor of the discriminant validity of the ethnic attitude measures while high correlations among the ethnic attitude measures would be

suggestive of their convergent validity. However, if ethnic attitude measures correlate as highly or more highly with egocentrism measures as they do with themselves, then the possibility can be raised that the two sets of measures are actually tapping aspects of a common construct. Such a finding would, for example, lead one to question whether an ethnic preference for one's own group might not simply reflect the limitations of a child's more general egocentric cognitive level of development.

Because egocentrism is itself a multidimensional construct (Kurdeck, 1977, 1978), two different measures have been included in this study, one requiring perceptual perspective-taking skills and another requiring cognitive perspective-taking. In addition, the study was conducted with children between the ages of 7 and 10 years. This age group was selected on the basis of literature cited previously which indicates that egocentric and ethnocentric responses decrease and consistent ethnic attitudes increase at approximately these ages. A range of scores was also made possible in using this sample. Finally, Kurdeck (1978) has suggested the importance in controlling for age effects when assessing the relationship between two age-related constructs. Following this suggestion, the study's results will be analyzed not only with total correlations, but also with partial

correlations excluding age in order to more thoroughly explore the relationship between ethnic attitude and egocentrism measures.

## Method

### Subjects

Participants in this study were 105 white second, third, and fourth grade children (35 per grade) taken from six classrooms of a public elementary school in the Midwestern United States. There was a total of 58 males and 47 females, with approximately equal representations of males and females within each grade level. Ages ranged from 7 years– 4 months to 10 years– 5 months.

### Measures

a. Doll Choice. For the Doll Choice (Clark & Clark, 1939; Hraba & Grant, 1970), each participant was seated at a low table and presented with one pair of same–sex dolls (one black, one white). Males were presented with two male dolls and females were presented with two female dolls. Each pair of dolls was dressed identically. Three questions were asked by the examiner: 1) Which doll is the nice one? 2) Which doll is the bad one ? 3)

Which doll is a nice color? Order of questions was counterbalanced. Participants were asked to select one of the dolls in response to each question. One point was scored for each ethnocentric response (i.e. each time the white doll was chosen for positive traits or the black was chosen for the negative trait).

b. Preschool Racial Attitude Measure (PRAM II). The PRAM II Form A (Williams, Best, Boswell, Mattson, & Graves, 1975) consists of 18 drawn color pictures in a notebook. Test-retest reliability for the PRAM II is reported to be .55. Each picture in the PRAM II presents two figures which are either light or dark skinned, male or female. For each picture the examiner reads a positively or negatively weighted story and asks the participant to select which of the two figures best fits the story. Twelve stories present light versus dark skinned figures. In addition, 6 pictures contain opposite-sexed figures of the same skin color (sex-role items). One point was scored for each ethnocentric response.

c. Katz-Zalk Projective Prejudice Test (KZ). Much like the PRAM II, the KZ (Zalk & Katz, 1976) requires the participant to listen to a story and choose the stimulus figure which best fits the story. The KZ consists of 55 color slides of actual children. Thirty-eight items assess ethnic

preference, 13 sex-role attitudes, and the remaining act as buffer items. The split-half reliability of the KZ is reported to be .81. Again, 1 point was scored for each ethnocentric response.

d. Perspective-Taking Task. The Perspective Task (Fishbein, Lewis, & Keiffer, 1972) assesses a child's visual perspective-taking ability. A round tray with three toys (a truck, rabbit, and man) was presented on a low rectangular table with the participant sitting across from the tray. Two rows of photographs depicting the toys from various angles around the table lay in front of the tray. Four photos represented the tray from the front (0 or 360 degrees), left side (90 degrees), back (180 degrees), and right side (270 degrees). The remaining four photos showed the tray from each of the four corners of the table. In a trial run, participants were asked to select the photo which looked most like the view they had from where they were sitting. All participants were able to do this. The examiner acknowledged the correct responses in the trial run. To begin the task, the experimenter then moved to one of four sides of the table and asked the participant to select which photo looked most like what the examiner saw of the tray from where she was now seated. The procedure was repeated until the examiner had taken a position at each of the four sides of the table. Order of positions

taken by the examiner was counterbalanced across participants. One point was scored for each incorrect photo choice. Reliability for this specific task was not available, although Kurdeck (1978) reports that there are consistent developmental trends for measures of this kind.

e. Role-Taking Task (RTT). The Role-Taking Task (Flavell, Botkin, Fry, Wright, & Jarvis, 1968) assesses a child's level of cognitive/social perspective taking. The RTT consists of 7 cards, each depicting a cartoon scene in which a boy is the major figure. When shown in order the pictures show a sequence in which the boy is walking along, is charged by an angry dog, and ends up standing in an apple tree with the dog walking away. With the pictures laid on the table, the subject is first asked to describe the sequence of events out loud. Next, the examiner removes the cards numbered 2, 3, and 5 (the only cards showing the angry dog), and leaves the remaining cards on the table. The participant is then asked to retell the story, but from the perspective a friend might have if they were to enter the room at that moment and see only the remaining cards. The 4-card story should be quite different from the 7-card story. The child is said to demonstrate non-egocentric role-taking abilities to the degree he or she can tell the story from the friend's perspective and suppress his or her own previous

perspective. If subjects give an appropriate response to the 4-card story, they are then asked to explain: a) why the friend would think the boy climbed the tree, and b) what the friend would say the dog is doing in the last picture. Responses were recorded by independent raters using Selman's (1971) scoring criteria. A score of 2 was given to stories which mentioned the angry dog as a motive for the boy's climbing the tree. A score of 1 was given if the participant did not mention the angry dog initially but did so upon questioning, and a score of 0 was given to stories in which the angry dog was omitted from both the predicted story and in response to questioning. Interrater reliability for the present study was 87 percent agreement.

Procedure

Five white female examiners tested participants individually on four measures (Doll Choice, Preschool Racial Attitude Measure II, Perspective-Taking Task, and Role-Taking Task). Each participant was tested in a small room outside the regular classroom. The Katz-Zalk Projective Prejudice Test was administered to each classroom as a whole. Procedures for each measure were standardized for all examiners. Order of task presentation was counterbalanced across participants with the Katz-Zalk test administered prior to individual tasks in half of the classrooms, and after the individual

tasks for the remaining classes.

## Results

No significant sex differences were found for any of the five measures employed in the study. Therefore, the following analyses were conducted using the entire sample of 105 subjects. Correlations among the ethnic attitude measures revealed that the PRAM II was significantly correlated with the Doll Choice ($r = .42$, $p < .01$) and the KZ ($r = .31$, $p < .01$). However, the KZ and the Doll Choice had almost no correlation with each other. The correlation between the two egocentrism measures was also significant ($r = .20$, $p < .05$). When the relationships between the two groups of measures were examined, all correlations were nonsignificant with one exception. The Doll Choice was significantly correlated ($r = .23$, $p < .05$) with the RTT.

Since both egocentrism and ethnic attitude are developmental constructs, correlations were also conducted to examine the relationships between age (in months) and each of the measures. The Doll Choice and PRAM II demonstrated significant negative correlations with age ($r = -.39$, $p < .01$,

and $r = -.20$, $p < .05$ respectively). On both measures subjects became less ethnocentric in their attitudes as they grew older. Similarly, the egocentrism task of Perspective–Taking was negatively and significantly correlated with age ($r = -.21$, $p < .05$) indicating that there were less egocentric responses as age increased. Neither the KZ nor the RTT were significantly correlated with age.

Because age may have affected the obtained correlations between the various measures, partial correlations were also computed excluding age as a variable. These analyses allowed a determination of whether or not age, which was shown to be significantly related to the Doll Choice, PRAM II, and Perspective–Taking Task, acted as a moderating variable. Only the partial correlation between the Doll Choice and the PRAM II ($r = .38$, $p < .01$) reflected a difference in the significance of the relationship between measures. When this partial correlation was compared to the total correlation it was found that age had acted to moderate the relationship between the two measures by reducing the significance level of their correlation with one another.

## Discussion

The results revealed that only one of the three ethnic attitude measures, the PRAM II, demonstrated a pattern of correlations suggestive of both convergent and discriminant validity. The PRAM II was significantly correlated with both of the remaining ethnic attitude measures (the Doll Choice and KZ), and uncorrelated with both of the egocentrism measures. In contrast, while the KZ was also uncorrelated with the egocentrism measures, it was significantly related to only the PRAM II and not the Doll Choice task and hence revealed less convergent validity. The Doll Choice was not only unrelated to the KZ, but also demonstrated poor discriminant validity by being significantly related to the Role-Taking measure of egocentrism.

The present study suggests that ethnic attitude measures may be quite variable in terms of the degree to which they reflect both convergent and discriminant validity. The lack of consistently significant correlations among these measures supports findings from earlier investigations (Ballard & Keller, 1976; Katz, Sohn, & Zalk 1975; Lerner & Knapp, 1976). The results have several important implications for this area of research. First, while the three ethnic attitude measures included in this study purport to measure

the same construct, they are not all significantly correlated with one another. The replication of this finding is especially disturbing since results from these particular measures are frequently cited in the literature and are compared with one another as reflections of ethnic attitude. A question is also raised of whether these results suggest the existence of several different aspects of ethnic attitude which are being tapped by the different measures. The possibility of multiple aspects of ethnic attitudes might help to explain the significant correlation between the Doll Choice and the egocentrism measure for Role-Taking. While the correlation may have been spurious, it could also reflect an interesting relationship between ethnic attitude and egocentrism. For example, it may be that the Doll Choice measures an aspect of ethnic attitude which requires a component of cognitive, but not perceptual, perspective-taking. On the other hand, because the PRAM II and KZ were not correlated with either the Role-Taking or Perspective-Taking egocentrism tasks, it is possible they are tapping aspects of ethnic attitude which are unrelated to a child's level of egocentrism. Such interpretations are speculative at this stage and would require further exploration.

The lack of significant sex differences with respect to the ethnic

attitude measures is in agreement with previous research conducted with the PRAM II (Williams, Best, & Boswell 1975) and KZ (Katz & Zalk, 1978). Nonsignificant sex differences on the egocentrism measures are also in agreement with earlier research efforts which failed to find significant differences in cognitive and perceptual perspective-taking (Ambron & Irwin, 1976; Nigl & Fishbein, 1974; Turnure, 1975).

While the results of the present study are important in shedding light upon the questions of the convergent and discriminant validity of ethnic attitude measures, it is necessary to keep in mind that the design of the study did not systematically include multiple methods of measuring both ethnic attitude and egocentrism. It is therefore not possible to know what proportion of the relationship between measures can be explained in terms of method variance. In addition, a restricted range of scores on the measures may also have influenced the findings. Finally, because the validity of the measures is contingent upon their reliability, it is also possible that the lack of clear convergent validity may reflect problems in reliability rather than validity.

Results of this study suggest that currently used measures of children's ethnic attitudes demonstrate varying degrees of convergent and

discriminant validity. It is important to determine the significance of these differences before one assumes, as has often been the case in the past, that all ethnic attitude measures are assessing the same entity. Further studies, particularly those employing a true multitrait–multimethod matrix design are needed to explore the validity of ethnic attitude measures. In addition, it will be helpful to continue investigations of the relationship between ethnic attitude and egocentrism and to define more clearly the extent to which these two constructs may overlap.

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